

Application Serial No. 10/823,105
Reply to office action of December 4, 2006

MAY 04 2007 PATENT
Docket: CU-3682

REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

Claims 1 and 3-12 are pending before the present amendment. By the present amendment, claim 1 is amended. No new matter has been added.

In the office action (page 2), claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,376,029 (Suzuki) in view of U.S. Patent No. 5,932,309 (Smith). Any suffix such as "et al." is omitted in a reference name.

In response, claim 1 has been amended, and the support for the amendment is found at least in the specification page 13, line 15 to page 14, line 7.

In the presently claimed invention as recited in claim 1, liquid crystal molecules and liquid crystal-like molecules comprising a protective layer are not cholesteric liquid crystals. However, Suzuki's liquid crystal molecules comprising a protective layer are cholesteric liquid crystals.

Suzuki utilizes the optical function of selective reflection derived from a helical structure of cholesteric liquid crystals comprising the protective layer. The presently claimed invention, on the other hand, does not use optical functions such as the selective reflection, but utilizes the compatibility improving function of the protective layer that allows core particles to disperse easily in the matrix liquid crystal.

Further, in Suzuki, only the cholesteric liquid crystals comprising the protective layer exhibit the function of selective reflection. In the presently claimed invention, however, the protective layer utilizes its compatibility improving function as well as the quantum size effect of the nanoparticle itself and the frequency dispersion characteristics of the dielectric constant originated from the Maxwell-Wagner effect.

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Accordingly, the presently claimed invention also has an effect of improving liquid crystal device element having matrix liquid crystals with nanoparticles dispersed.

As described above, the presently claimed invention has completely different effects to achieve compared to those of Suzuki, and not every claimed limitations of claim 1 is taught by Suzuki or Smith, whether these references are considered individually or in combination.

As to claims 3-12, these claims are allowable at least since they depend from the independent claim 1, which is respectfully submitted to overcome the standing rejection over the cited references for the reasons above. An indication of allowable subject matter is respectfully requested.

For the reasons set forth above, the applicants respectfully submit that claims 1 and 3-12, now pending in this application, are in condition for allowance over the cited references. Accordingly, the applicants respectfully request reconsideration and withdrawal of the outstanding rejections and earnestly solicit an indication of allowable subject matter. This amendment is considered to be responsive to all points raised in the office action. Should the examiner have any remaining questions or concerns, the examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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